ATC ASSOCIATES INC.

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March 17, 2008

Mr. Peter Coulopoulos
Summit, Inc.
6901 West Chicago Avenue
Gary, IN 46406
219-712-3206

Re: Slag Analysis Report
Summit, Inc.
6901 West Chicago Avenue
Gary, Indiana
ATC Project No. 23.30507.8002

Dear Mr. Coulopoulos:

ATC Associates (ATC) has completed the slag aggregate testing to determine if expansive properties are present in the on-site slag. This slag aggregate testing was requested by Mr. Peter Coulopoulos of Summit, Inc. on February 21, 2008. The purpose of this testing was to determine the percent of expansion and iron oxide (Fe_2O_3) content in the slag material.

The autoclave expansion testing was performed after ATC representatives informed Mr. Coulopoulos of the potential expansion problems associated with some slag materials.

ATC personnel obtained a composite surface slag sample on February 21, 2008 from the area where the new automotive shredder is to be constructed. The sample was submitted to CTL Group in Skokie, Illinois for autoclave expansion and oxide analysis.

The sample was prepared and tested for autoclave expansion in accordance with ASTM C595 and modified ASTM C151-05. The laboratory testing results indicate the slag has an elevated (>8.3%) expansion potential.

Analytical test results indicate the slag material has a Fe_2O_3 content of 27.32 %. This concentration is significantly higher than that found in typical air-cooled blast furnace slag (0.1 to 1.5 %).

We trust this information is sufficient for your needs. If you have any questions, do not hesitate to contact us at your convenience.

Sincerely,
ATC Associates Inc.

David S. Green, LPG
Senior Project Manager

Akhtar Zaman, PE
Branch Manager

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March 14, 2008

Mr. David Green
ATC Associates, Inc.
2224 Industrial Dr., Suite A
Highland, IN 46322

Via E-Mail: *david.green@atcassociates.com*

Test Results of ASTM C 151 Autoclave Expansion of Slag Sample
CTLGroup Project: 057070

Dear David:

Attached are the referenced test results. You submitted one slag sample identified as "S-1" that arrived at CTLGroup on February 27, 2008. The sample was prepared prior to testing by grinding to a fineness of 20% maximum retained on the 40 μm sieve during wet-sieving as specified in American Society for Testing and Materials (ASTM) C 595[1].

As you requested, testing was performed in accordance with modified ASTM C 151–05[2]. The standard was modified to accommodate a sample containing only ground slag, per your request. The expansion that occurred during testing was too large to be measured by the standard length change comparator. The expansion was greater than 1 in. (3 cm) as measured by a ruler. Extensive cracking was observed, as shown in Figures 1 and 2. Due to the extensive cracking that occurred as a result of the expansion within the autoclave frame, the expansion measurement is approximate. The magnitude of expansion that occurred during autoclaving only represents the ground slag samples. Expansion may not necessarily occur in larger particle size samples that are not subject to high temperature and pressure. Additional testing may be necessary to determine the potential for expansion under different conditions.

We appreciate this opportunity to conduct testing services for you. Should you have any questions, please contact me.

Sincerely,

Matthew D'Ambrosia
Project Manager
Materials Consulting

mdambrosia@ctlgroup.com
Phone: (847) 972-3264

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[1] ASTM C 595-05, *Standard Specification for Blended Hydraulic Cements*, TABLE 3 Requirements for Pozzolan for Use in Blended Cements and for Slag for Use in Slag-Modified Portland Cements

[2] ASTM C 151–05, *Standard Test Method for Autoclave Expansion of Hydraulic Cement*

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Client:	ATC Associates Inc.	CTL Project No.:	057070
Project:	P.O. No. 23.30507.8002	CTL Proj. Mgr.:	Matthew D'Ambrosia
		Analyst:	Snezana Markovic
Contact:	David S. Green	Approved:	
Submitter:	David S. Green	Date Analyzed:	March 4, 2008
Date Received:	February 27, 2008	Date Reported:	March 4, 2008

REPORT OF CHEMICAL ANALYSIS

Client's Sample ID:	S-1
Material type:	Slag
CTL Sample ID:	2054901

Analyte	Weight %
SiO_2	11.56
Al_2O_3	2.80
Fe_2O_3	27.32
CaO	40.09
MgO	12.19
SO_3	0.11
Na_2O	<0.01
K_2O	<0.01
TiO_2	0.49
P_2O_5	0.89
Mn_2O_3	4.25
SrO	0.04
Cr_2O_3	0.52
ZnO	0.01
L.O.I. (950°C)[2]	-1.24
Total	99.04

Alkalies as Na_2O <0.01

Notes:
1. This analysis represents specifically the sample submitted.
2. Results reported on an oven dry (105°C) basis.
3. Oxide analysis by X-ray fluorescence spectrometry. Samples fused at 1000°C with $Li_2B_4O_7/LiBO_2$.
4. Elemental sulfur and sulfide sulfur may be lost during high temperature ignition and fusion.
5. This report may not be reproduced except in its entirety.

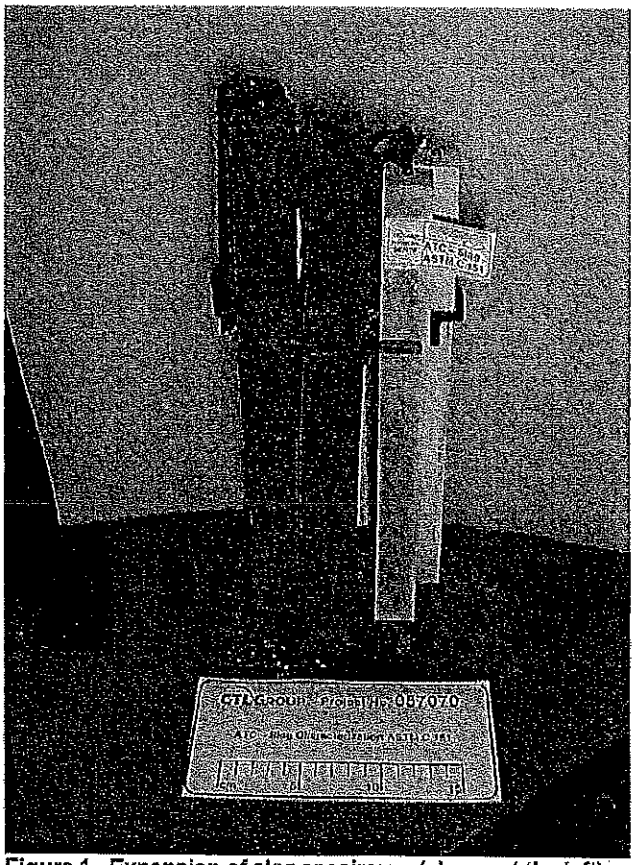

Figure 1. Expansion of slag specimens (shown at the left) compared to standard mortar bar specimens on the right.

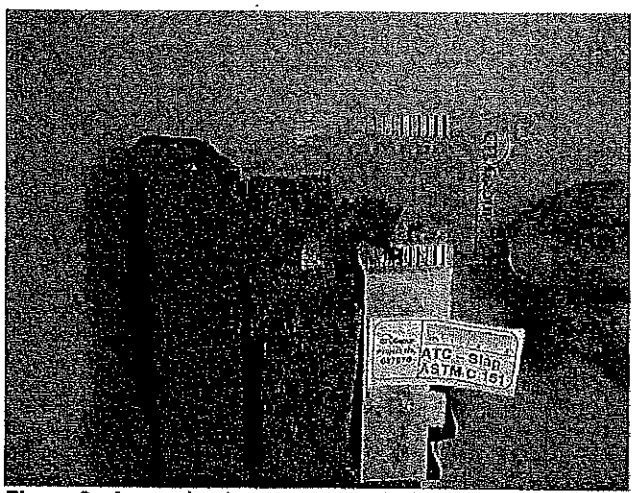

Figure 2. Approximate measurement of expansion in slag specimens using a ruler.